## **REMARKS**

Claims 2-5 and 11 are pending.

Claims 11 and 2-5 are rejected.

## **Double Patenting Rejection**

Claims 11 and 2-5 are rejected under the judicially created doctrine of double patenting over claim 6 of US 6,254,724.

Examiner alleges that claim 6 of US 6,254,724 formulae Z, Z\*, AA and AA\* are substantially the same as claimed species. The claimed species would have been an obvious variant of species Z, Z\*, AA and or AA\*.

The Applicants fail to understand why the present claims are obvious in light of claim 6 of US '724.

Claim 6 of US '724 claims a **composition** requiring the presence of a) a pulp or paper which still contains lignin, and b) species Z, Z\*, AA and or AA\*.

Species Z, Z\*, AA and or AA\* as disclosed in claim 6 of US '724.

The present claims by contrast are limited to

## A compound of formula VIII or VIIIA

m ranges from 2 to 6.

Claim 6 of US '724 requires the presence of at least one OH in the chain connecting the quaternary ammonium and the piperidine ring. Present claim 11 allows for no such substitution on the [CH<sub>2</sub>]<sub>m</sub> chain. There is no structural overlap between claim 6 of US '724 and the present claim 11.

Claim 6 is a compositional claim requiring the presence of pulp or paper containing lignin and the present claims are directed to a set of non-overlapping compounds per se. Thus the claim 6 and present claims represent different statutory classes.

The present invention receives no patent protection from US '724 because structures VIII and VIIIA are not encompassed by claim 6 of US '724. Thus the present invention would not extend patent rights.

Applicants note that Office refers to *In Re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968) on page 3 of the Office Action. The Office states that "there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. However, *In Re Scheller* the facts of situation were quite different than those of the present case. *In Re Scheller* the earlier patent had actually disclosed what was being claimed in the later application. Furthermore, *In Re Scheller* the original claims also encompassed the latter claims. See page 215 in 158 USPQ section [5]. In contrast, the Applicants

have not previously disclosed structures which correspond or encompass those presently claimed. There are absolutely no structures in US '724 which correspond to structures VIII and VIIIA.

The determining factor in deciding whether or not there is double patenting is the existence vel non of patentable difference between two sets of claims (*In re Borah*, 354 F.2d 1009, 148 USPQ 213).

The Examiner alleges that the claimed species would have been an obvious variant of species Z,Z\*, AA and/or AA\*.

As stated above, claim 6 of US '724 requires the presence of at least one OH in the chain connecting the quaternary ammonium and the piperidine ring (Species Z, Z\*, AA and or AA\*). Present claim 11 claims no such substitution on (formulae VIII and VIIIA). Nor has the Examiner presented prior art that suggests substituting a hydroxyl group for a hydrogen. See Ex parte Brouard, 201 USPQ 538 (Bd. Pat. App. 1976).

Thus the Applicants aver that the double patenting rejection is improper and respectfully request that the Office withdraw the rejection.

## 35 USC 103(a)

Claims 11 and 2-5 are rejected under 35 USC 103(a) as obvious over WO99/05108 or Seltzer et al. US 6,254,724.

The Office alleges that examples Y\*, Z\*, AA\* and BB\* of WO '108:

$$\begin{pmatrix}
OH & & & & & & \\
OCH_2 - CH - CH_2 - N & & & & & \\
CH_3 & & & & & \\
CH_3 & & & & &$$

$$\begin{pmatrix}
OH \\
OCH_2 - CHCH_2O(CH_2)p-N^{+}(G_1)_3X^{-} \\
CH_3 & CH_3 \\
CH_3 & CH_3
\end{pmatrix}$$
(AA\*)

$$\begin{array}{c|c}
CH_3 & CH_3 \\
CH_3 & CH_3
\end{array}$$

$$\begin{array}{c|c}
CH_3 & (BB^*)
\end{array}$$

and examples Z,Z\*, AA and AA\* of US '724 disclose compounds substantially the same as the claimed compound.

See structures and argumentation above under Double Patenting for US '724. Applicants' arguments overcoming the obviousness double patenting rejection apply equally well to the 103(a) rejection based on US '724.

The Applicants continue to point out that the present structures do not overlap with the structures of WO '108 or US '724.

Both cited references show compounds which are either substituted by hydroxyl groups and/or interrupted by oxygen. Structure VIII and VIIIA show no such substitution.

Examiner further states that the alternativeness of using alkylene chains containing 1 to 4 carbon atoms interrupted with two oxygen's and not interrupted or interrupted with hydroxyl groups is taught by WO '108 on page 39 and page 8, lines 6-20.

The "alternativeness" the Examiner refers to on page 39 of WO '108 are descriptions for formula A and A\* not Y\*, Z\*, AA\* and BB\* of WO '108 identified above. Applicants do not understand how the R<sub>1</sub> definition for structures A or A\* apply to structures Y\*, Z\*, AA\* and BB\* of WO '108.

Page 8, lines 6-20 describes examples for alkyl groups with 1 to 4 carbon atoms interrupted by one or two oxygen atoms are  $-CH_2$ -O-CH<sub>3</sub> etc. The Applicants point out that this is the <u>definition</u> for what is meant by an alkyl group with 1 to 4 carbon atoms interrupted by one or two oxygen atoms, not a suggestion to replace carbon atoms with alkylene groups interrupted by one or two oxygen atoms.

Thus the Examiner has not successfully pointed to any motivation or suggestion within WO '108 or US' 724 which would provoke one skilled in the art to make the compounds described by formulae VIII and VIIIA.

"The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ 2d 1780, 1783–84 (Fed. Cir. 1992).

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There is no suggestion or motivation within WO '108 or US '724 to convert the chains of interest (hydroxyl substituted and/or to interrupt with oxygen) to an alkylene as in the instant claims.

Reconsideration and withdrawal of the rejection of claims 11 and 2-5 is respectfully solicited in light of the remarks *supra*.

Since there are no other grounds of objection or rejection, passage of this application to issue with claims 11 and 2-5 is earnestly solicited.

Applicants submit that the present application is in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,

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